

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F24F12/00 F28F27/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F24F F24D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)
EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 289 974 B1 (KAMINSKI THOMAS J ET AL) 18 September 2001 (2001-09-18) column 13, line 3 - line 14 column 17, line 59 - column 18, line 5	1-3, 5-9, 11, 12
Y	column 23, line 46 - column 24, line 36; figures	10
Y	US 5 024 263 A (NYMAN MIKKO ET AL) 18 June 1991 (1991-06-18) abstract; figures	10
X	PATENT ABSTRACTS OF JAPAN vol. 013, no. 392 (M-865), 30 August 1989 (1989-08-30) -& JP 01 137139 A (MATSUSHITA SEIKO CO LTD), 30 May 1989 (1989-05-30) abstract; figures	1-3, 6, 9, 11
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

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T later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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& document member of the same patent family

Date of the actual completion of the International search

5 June 2003

Date of mailing of the International search report

13/06/2003

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G.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 062 296 A (BROBERG BO) 16 May 2000 (2000-05-16) abstract column 8, line 37 - line 44; claim 10; figures	1-3,6-9
X	WO 95 21357 A (MIDDENDORF JOHANN GERHARD ;URSUS BV (NL)) 10 August 1995 (1995-08-10) the whole document	1-4,9

INTERNATIONAL SEARCH REPORT

PCT/NL 03/00183

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6289974	B1	18-09-2001	US 6257317 B1	10-07-2001
			WO 9960307 A1	25-11-1999
			US 2001018964 A1	06-09-2001
			WO 9902922 A1	21-01-1999
			US 2001030036 A1	18-10-2001
US 5024263	A	18-06-1991	FI 875613 A	19-06-1989
			AT 69101 T	15-11-1991
			CA 1324256 A1	16-11-1993
			DE 3865968 D1	05-12-1991
			DK 389789 A	09-08-1989
			EP 0371082 A1	06-06-1990
			WO 8905947 A1	29-06-1989
			HU 205449 B	28-04-1992
			JP 2502565 T	16-08-1990
			JP 2688374 B2	10-12-1997
			NO 893264 A , B,	14-08-1989
			SU 1831641 A3	30-07-1993
JP 01137139	A	30-05-1989	NONE	
US 6062296	A	16-05-2000	SE 508957 C2	16-11-1998
			DE 69717420 D1	09-01-2003
			DK 877909 T3	24-03-2003
			EP 0877909 A1	18-11-1998
			SE 9600390 A	03-08-1997
			WO 9728412 A1	07-08-1997
WO 9521357	A	10-08-1995	NL 9400152 A	01-09-1995
			AT 171260 T	15-10-1998
			AU 1392595 A	21-08-1995
			CA 2181886 A1	10-08-1995
			DE 69504812 D1	22-10-1998
			DE 69504812 T2	12-05-1999
			EP 0740762 A1	06-11-1996
			WO 9521357 A1	10-08-1995

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